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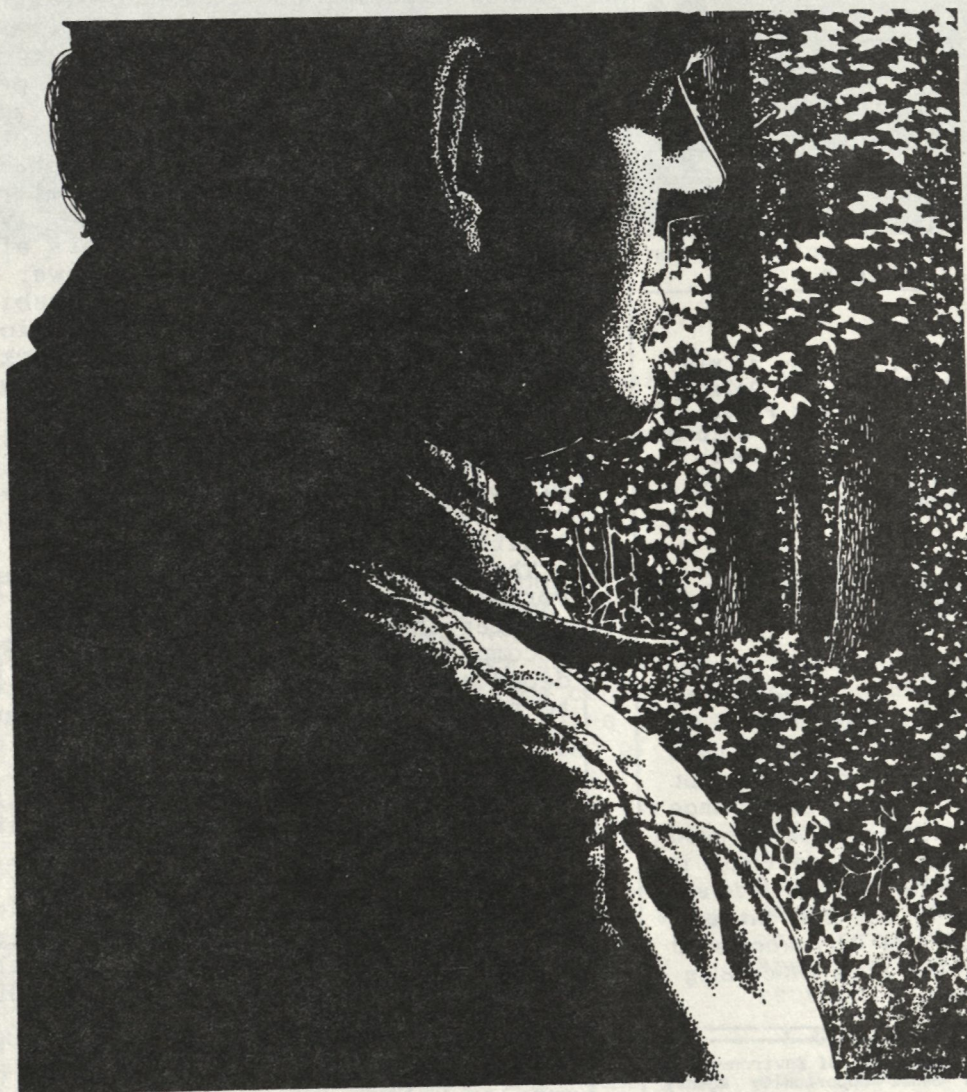


Citizens' Bulletin

Volume 13 Number 11 July/August 1986 \$5/yr.

The Connecticut Department of Environmental Protection

A Legacy of Pride



The CCC's Golden Jubilee

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Features

- 3 Cs Golden Jubilee
Pamela Aey Adams
- 9 Birdcraft Museum
Clint Chamberlain
- 11 Cleanfield, CT
Toby Goodrich
- 14 Natural Heritage Registry
Diane Mayerfeld
- 20 Long Island Sound Study
Paul Stacey

Departments

- 2 Wider View
- 7 Nature Notes
- 10 For Your Information
- 18 Bulletin Board
- 23 Trailside Botanizer
- 23 Night Sky

Cover:

Michael D. Klein

Commissioner: Stanley J. Pac
Director Info & Ed: William Delaney
Editor: Robert Paier
Graphics: Rosemary Gutbrod
Composition: Caryn Alleva
Circulation: Olive Tyghter
Phone: 566-5524

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The Wider View

Living with History

by Robert L. Garrepy

State Forester, Bureau of Forestry

A learned individual once said: "For most of us, what we do today won't make any difference in a hundred years." For individuals, that statement may be true, but groups of individuals, united in a common cause, can indeed make a difference and shape the future. The trouble is, of course, that at the time, few participants recognize the importance of their actions. For at least one select group, however, not only did the participants know at the time that their actions were special, but for a half-century, American society has held their accomplishments in high esteem. It is fitting then that Connecticut will make a special effort to recognize the Civilian Conservation Corps some 50 years after its days of glory. Their numbers are fewer now, and time has taken a toll of physical capabilities, but former CCC members have an infectious enthusiasm that can almost turn back the clock.

The Civilian Conservation Corps was one of several public assistance programs initiated by the Roosevelt administration in 1933 -- the darkest days of the Great Depression. It was primarily designed to take unemployed young men off the streets and to provide useful work in a healthy outdoor environment.

The CCC was a federal program that worked. Perhaps times -- and bureaucracies -- were simpler then, but it was a substantial accomplishment to have four major federal departments cooperate with the state agencies, to have a new nation-wide program under way with 275,000 enrollees in less than 100 days.

There was a total of 20 CCC camps in Connecticut, with a maximum of 16 in operation at any one time. Camp Roosevelt, in Cockaponset Forest, was the first installation, established in May, 1933. The last Connecticut facility, Camp Lonergan, in Voluntown, was closed in May, 1942, almost exactly nine years after the program began. Lonergan was also the longest operating camp, being active from June 6, 1933, to May 28, 1942.

Of the 20 camps in the state, 18 had closed before the start of World War II. Contrary to popular belief, it was not the demand for military personnel that ended the Cs, but an

(cont'd., on pg. 19)

The Cs Celebrate their Golden Jubilee



Leading a rugged life of hard work with little pay, the Cs learned discipline and pride.

by

*Pamela Aey Adams,
Principal Environmental Analyst
photos by Harold A. Preston,
courtesy of Goodwin State Forest*

In March of 1986, the DEP's Committee on Interpretive Services gathered for its monthly meeting at Peoples State Forest in Barkhamsted (or, more accurately, Pleasant Valley). The Committee's task for this meeting was to evaluate a rustic wood and stone building on site for possible use as a Seasonal Interpretive Center. The Committee was greeted by spunky, 80-year-old Mary Pesco Sherwood, who explained that it was her idea to reopen the building as a nature center. Ms. Sherwood, who was the first woman in the country to earn a degree in forestry, had directed a nature

museum in this building from 1938 to 1940. She was most anxious to see the facility in use again as an outdoor education center.

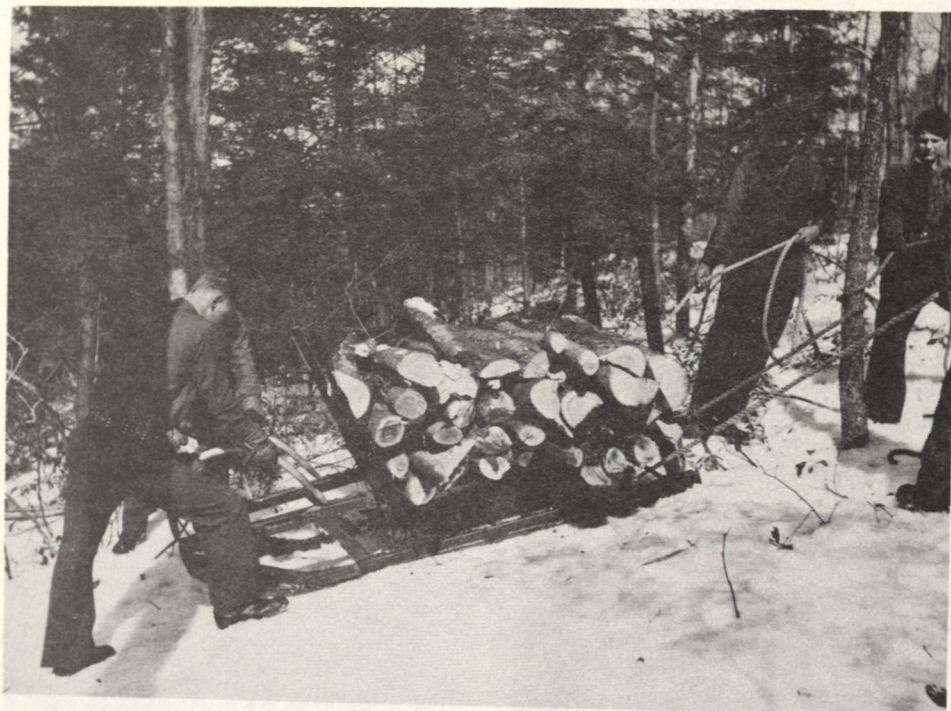
She recounted tales of life in the '30s and of how the museum was built painstakingly, stone by stone, by the men of the CCC, the Civilian Conservation Corps. As an aside, she pointed out that the CCC, which had been active from 1933 to 1942, was now in its golden anniversary period, and what a shame that nothing had been done to honor past enrollees. Before the meeting was over, the Committee had decided not only to run interpretive

programs at the museum, but to hold a reunion in honor of the CCC.

Although the plans for the museum/nature center are progressing, the CCC reunion has moved into the forefront of the planning process. Members from all disciplines within the DEP Division of Conservation and Preservation are working with the Committee on Interpretive Services to ensure a successful reunion.

A Glance Back in History

Some readers of this article may be wondering what on earth the Civilian Conservation Corps was, and why it should be worthy of



The CCC was designed to put untrained young men between 18 and 25 back to work. Some of them are shown here with a wood sled at Nipmuck State Forest.

any special recognition. A word of explanation may be in order.

The year was 1929. The country was in the throes of one of the worst disasters of its history. It was not caused by natural disaster, disease, or military attack, but by a stock market crash of such proportion that it sent the entire nation spiraling into economic ruin. It would take years to recover.

By the early '30s the Great Depression had become our national nightmare. Millions of people were out of work, crime was rampant, and suicide had reached an epidemic rate. Something had to be done.

The answer came in the form of a new president, Franklin D. Roosevelt, who was elected in 1932. He was a man of strong character, forceful personality, common sense, and a knack for making good come out of bad. One of FDR's first programs toward bringing about economic recovery was the Civilian Conservation Corps (CCC).

The program was designed to put out-of-work, untrained young men between 18 and 25 years of age back to work. The goal was both to place them in jobs that would train them for future employment as well as to benefit the whole country. Working and living conditions were rugged, pay was low (\$30 per month, with \$25 going home to the family and \$5 remaining with the worker), and the food was simple. All this was better, however, than standing in bread lines or roaming aimlessly in the streets. In the first few weeks of the program, hundreds of thousands of young men had enrolled.

The Civilian Conservation Corps was initially run by the military, although the enrollees were considered civilians. Conservation programs were designed and supervised by state and federal forestry and park agencies. Had military discipline not been utilized, however, the program may have been doomed to bureaucratic failure. The nickname

"Roosevelt's Tree Army" was soon coined from this marriage of the military and conservation work. The young men were assigned to remote forest camps all over the country. Many were placed on trains with only the clothes on their backs and a sandwich in hand. Some did not even know their destination.

Pride and Self-discipline

Once at the camp, the men were outfitted in loose jeans, for work, and old World War I army dress uniforms. At first, they were housed in army tents and had to construct their own wooden barracks and associated camp buildings. The Cs learned self-discipline and were trained in such areas of conservation work as forest management, fisheries and wildlife habitat improvement, fire fighting, equipment handling, and maintenance. The men put in long, hard hours, worked outdoors in extreme weather conditions, and loved every minute of it. They gained self-esteem, self-respect, and a sense of pride in their work and their country.

The program is remembered with fondness by its participants. Men who were in the Cs still hold their heads high and point with pride to their accomplishments -- many of which are still evident today.

The CCC's Legacy

Connecticut gained much from the CCC program. At the peak of the program, Connecticut had 20 forest CCC camps. The first one, Camp Roosevelt, was established at the Cockaponset State Forest on May 23, 1933. The last to close was Camp Lonergan in Pachaug State Forest on May 28, 1942. During that time, nearly 40,000 men

were employed in this state.

A few of the CCC's major accomplishments in Connecticut are as follows:

- 3,589 acres of trees planted
- 150+ miles of forest truck trails constructed
- 409 miles of state land boundary lines surveyed
- 89,369 cords of wood cut
- 631,567 board feet of logs harvested
- 310,000 acres insect and disease control
- 5 dams and numerous stream improvement projects and trout ponds at state hatcheries
- 4 fire towers constructed
- 5 sawmills
- numerous dams and bridges
- charcoal kilns

- ski trails
- numerous Adirondak shelters along hiking trails
- a new Stone Nature Museum and many renovation projects at state buildings
- the pavillion at Rocky Neck State Park

In addition to their regular duties, the Cs were often used in times of natural disaster. After the city of Hartford was flooded in the mid-'30s, the Cs were called upon to help with the cleanup. (After the work was done, the governor treated the men to a steak dinner on the Capitol building lawn and gave each one a Mickey Mouse wrist watch as a token of appreciation.) The Cs were also

instrumental in the massive statewide cleanup after the 1938 hurricane.

Perhaps the most important thing that grew out of the Cs was the fraternal spirit which lives on in the hearts of the men who were in the camps and lived through those times. As one gentleman put it, "The camps had all of the feeling and the closeness of war, but without the horror."

The Cs of Today

Many of the traditions of the CCC are being carried on today in the form of the Connecticut Conservation Corps, a youth program inaugurated in 1982 in the DEP's Division of Conservation and



The mess tent at Camp Chapman with some members of "Roosevelt's Tree Army" gathered around.



The mess hall at Camp White: Had military discipline not been used, the program might have failed.

Preservation. The program sets unemployed youths, 18 to 25 years old, to work building park facilities, trails, and dams, planting trees, and fighting soil erosion and forest fires. The length of employment with the corps is one to two years. Men and women (women were not allowed in the original CCC) who can certify that they are unemployed, not leaving school in order to join the corps, and are physically capable of performing strenuous outdoor work are eligible to join. Connecticut Conservation Corps workers assist in fish and wildlife management programs, work on shelters, bridges, storage areas, and improvements to make park facilities more accessible to handicapped visitors. They also work on various maintenance projects.

The program has operated successfully for four years and currently employs 72 youths who earn between \$3.37 and \$5.25 an hour performing valuable conservation work,

bettering the state of Connecticut and themselves.

The Golden Jubilee

The DEP hopes to re-kindle the spirit of the CCC by hosting a reunion in honor of the Golden Jubilee of the Civilian Conservation Corps. It will be a time for the Cs to come together to renew old friendships and relive what many remember as the best days of their lives. The reunion symbolizes the appreciation of the state for all that the Cs gave.

The reunion will have an extra meaning for many, as it will be the first meeting of the Cs of 50 years ago and today's Connecticut Conservation Corps. It should prove to be a valuable exchange for both corps, with one group learning about its "roots," and the other seeing its legacy carried on.

The reunion will be held on Saturday, September 6, 1986, at Peoples State Forest in Barkhamsted. It will begin at 11:00 a.m. and continue until 6:00 p.m. An exhibit of old

photos and memorabilia will be displayed in the Museum. Snacks will be served all day and a dinner will be provided free of charge for the CCC member and one guest. Others who wish to attend will be asked to pay for their meals.

For further information, please write or call, Pamela Aey Adams, DEP, Room 248, State Office Bldg., 165 Capitol Ave., Hartford, CT 06106. Phone (203) 566-5026. The deadline for registration will be August 29, 1986.



A work crew at Tunxis State Forest: Some of the accomplishments are still evident today.

Sights and Sounds of a Summer Night

by Penni Sharp

Summer nights are filled with the songs of insects. The katydid and cricket chirp loudly and are joined by other voices less easy to identify. With the windows open wide, this nightly chorus is very evident, and one marvels that creatures so small can create such a din. The life cycle of many insects may be short, in some cases but a day, but it is long enough for them to make their presence known.

The Magic of the Firefly

If some insects are noisemakers, there is another unique group that attracts our attention by other means -- light. Step outside on a balmy July night, and suddenly a light flashes, then another, yet another. Soon an entire yard may be lit with pinpoints of flashing lights zig-zagging among the shrubs and grasses. Lightning bugs, or fireflies, if you prefer, are the lightmakers.

One small family within the insect class is the Lampyridae, or lightning bugs. Like most children, I was fascinated by lightning bugs. I loved to watch them dance about the yard, winking their tiny lamps. Until I actually caught some and examined them at close range, I

imagined them as carrying miniature lanterns.

Years have lapsed since I have chased fireflies, yet for me they have not lost their magic. I still watch them with wonder on a summer evening.

The light from the firefly pulses from the beetle's abdomen, and is



unique in that it is a cold light. That is, nearly all of the radiant energy is light as opposed to heat. In an electric arc (such as a lightbulb) only 10 percent of the energy is light, with the remaining 90 percent given off as heat.

How Do They Do It?

How does a firefly produce its amazing light? In one typical genus, *Photinus*, both male and female have light-producing organs arranged in pairs on the underside of the abdomen. Each light organ has many thousands of large cells called "photocytes" which are underneath a transparent portion of the exo-skeleton. These organs are well-supplied with small tubes known as tracheae, through which the insect receives its supply of oxygen. The light is created by the reaction of oxygen with a substance known as luciferin which is produced by the photocytes. The reaction is believed to be triggered by an enzyme known as luciferinase.

And Why?

The question remains, then, as to why lightning bugs flash. It is thought that the flashing is a mating response.

The males generally begin the flashing in a well-defined territory. Females, which in most species are wingless, signal back to an approaching male. After the exchange of light signals, mating normally ensues. Each species has its own characteristic flashing rhythm. The signals vary in color, duration, and intensity, and the flight paths of the males may also differ.

Experts can identify the different species by the length of the flashes and the time of the interval between flashes.

Mostly nocturnal, fireflies may be found during daylight hours resting on vegetation. Both adults and larvae are predaceous, and their diet includes small insects, snails, and slugs. In some species, the adults do not feed. The wingless females and the larvae can look quite similar. Although the light given off by the males is usually the brightest, females and larvae are also bioluminescent and are called "glow-worms."

Insect Singers

While the fireflies bring us the magic of their visual display, there are other insect singers which fill the summer night with sound. The nightly chorus seems to build up during August, and the buzzing, clicking, and chirping is a gentle reminder that the days have grown shorter and the lazy season of summer is drawing to a close.

A katydid clings to the screen door and repeats its cadence call of "katydid, katydid." From somewhere in the dark, another answers. This handsome green insect is a member of the order *Orthoptera*, a name derived from the Greek "orthos" meaning straight and "ptera," wings. The name refers to the forewings which are not used for flying.

Katydids produce their distinctive song by rubbing the forewings together. They are more often heard than seen. Most katydids are vegetarians and feed on the foliage of trees. Although some western katydids can be destructive to oranges, most of these

insects do little damage.

Other well-known songsters are the crickets. They are similar to the katydids in that they have long, tapering antennae and strong sturdy legs. They are shiny black or dark brown in color. The males chirp by rubbing the file on the underside of one forewing against a roughened spot on the upper side of the other.

One cricket species is particularly interesting in that the timing of its chirps is correlated to the temperature. Take the number of chirps per minute, divide by four and add 40. The result should approximate the temperature in Fahrenheit. The house cricket also chirps with varying speed, depending upon the temperature.

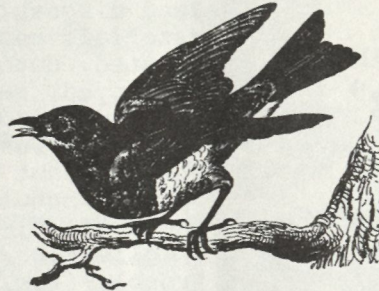
Watching and Listening

When you are outdoors on a summer night, be sure to enjoy all the sounds and sights. Listen for the katydid, and try to distinguish some other voices. Watch the pattern of the firefly display. It's a nice memory to have for other times, when the nights are not so warm and lazy.



A Visit to Fairfield's Birdcraft Museum and Sanctuary

*Text and Photo by
Clint Chamberlain*



The Connecticut Audubon Society's Birdcraft Museum and Sanctuary in Fairfield is an attractive habitat for feathered creatures. Even in an age of television and VCRs, birdwatching remains high in popularity -- modern technology is not yet able to fully duplicate the sight of a majestic cardinal splashing in a pond on a warm summer day. This is why the Sanctuary and Museum have continued to thrive.

In addition to the six-acre sanctuary, visitors can explore the museum, which contains dioramas of Connecticut's wildlife. Changing exhibits are displayed to provide general information about birds and the environment. The sanctuary also contributes to the greater body of knowledge of ornithology; data gathered from banding operations provide information on migratory routes, life spans, and plumage changes.

Founded in 1914, Birdcraft was placed on the National Register of Historic Places three years ago, and is the oldest privately-owned songbird sanctuary in New England. Lately, an interest in reviving it has been gaining momentum, with substantial infusions of time and creative energy from staff and members over the past few years.

Lauren Brown, curator of the museum for two years, has been a key factor in the revitalization of Birdcraft. Prior to coming to Birdcraft, she was a museum assistant at the Yale Herbarium. She

has written and illustrated books on botany, and is eager to pass on her wealth of information on birdcraft and other environmental subjects to visitors to the museum.

Birdcraft Museum and Sanctuary is open to the public on Thursdays, Saturdays, and Sunday afternoons, and by special arrangement. School groups are also welcome for special tours. It is located at 314 Unquowa Road, just outside downtown Fairfield. For further information, call (203) 259-0416 or 259-6305.



Birdcraft Museum has enjoyed a new infusion of interest and energy.

Household Hazardous Waste

What is your town doing?

by Leslie Lewis,
Citizens'

Participation Coordinator

Dealing with household hazardous waste is a growing concern in Connecticut. So far, 24 chemical collection days, involving 53 towns, have been held -- more are planned. The legislature has recognized the interest in this program and passed a public act providing more grant funds to municipalities or agencies sponsoring collections.

A household hazardous waste collection is not run like a simple garbage pick-up. The DEP requires the agency sponsoring the collection to hire a licensed hazardous waste transportation firm to process the waste at a central location. The vast quantities and different types of waste accumulated at a collection pose a potential safety hazard, so only the chemists and technicians from the transporter may sort and package the materials. Safety precautions and traffic control are strictly maintained on site.

Citizens often have questions about the final disposal of the waste. Since Connecticut has no treatment or disposal facilities which can process the household products, they are all transported to licensed facilities in other states. Whenever possible,

the DEP recommends treatment (neutralization of corrosives, for example) or destruction methods such as incineration instead of land disposal. Some materials cannot be treated, detoxified, or destroyed, however, and these must go to licensed hazardous waste landfills. This may not be the ideal option, but it is the only one available at this time.

Collection days are not trouble-free, nor do they represent the ultimate solution for the household hazardous waste problem. They may be inconvenient for people to get to, they generally occur only once a year at a given locality, and they are expensive. Moreover, some types of waste, such as herbicides containing the active ingredient 2,4,5-T, or pentachlorophenol, which is found in wood preservatives, cannot be collected because no

disposal outlets are available in the United States. Under the provisions of the new public act, the DEP will study the current household hazardous waste program and will make recommendations for the future. Until other disposal options are formulated, the collection days provide the best method for homeowners to dispose of their unwanted hazardous products.

The following towns have already sponsored collection days; some are planning follow-up events. The second list includes municipalities which are planning collections for the fall of 1986. If your community is not listed and you are interested in developing a household hazardous waste program, contact your local elected officials. The DEP can provide further information and technical and financial assistance.

Collection Days in Connecticut

Towns which have held collections as of July, 1986:

Ridgefield (2)
Mansfield
*Westport/Weston
Greenwich
*Wilton (with Ridgefield)
Southington
Farmington
Manchester
*Salisbury/Sharon
**Killingly/Putnam/
Woodstock/Thompson/
Brooklyn/Plainfield/
Sterling/East Lyme
Windsor
North Haven
**Barkhamsted/Winsted/
New Hartford/Colebrook/
West Hartford
**Old Saybrook/Lyme/Old
Lyme/Westbrook/Clinton/
Chester/Essex/Killingly
**New Milford/Sherman/
Bridgewater/Roxbury/
Washington
Cheshire

*Redding/Easton
*Bristol/Burlington
**Bethel/Brookfield/
Newtown
*Wethersfield/Newington
*Granby/East Granby
Fairfield

Towns planning collections for fall 1986 (as of July):

*Avon/Canton/Simsbury
Madison/Guilford
Branford/North Branford
**Middletown/Middlefield/
Durham/(perhaps other
surrounding towns)
Milford/Orange/West Haven
Weston
Southington
Groton
Farmington
Plainville

* Regional Collection
** Sponsored by Regional
Planning Agency or
Disposal District



The eighth grade class at Renbrook School in West Hartford plans the future of Cleanfield, CT.

Connecticut Students Tackle Tough Environmental Issues

*Text and Photos by
Toby Goodrich,
Senior Environmental Analyst*

Citizens of Connecticut are facing some harsh realities about the political response to environmental issues and pollution control. People debate emotion-charged topics like risk-taking in public health, waste management responsibilities of the taxpayer, and import/export of hazardous wastes. Public hearings are held and points of view are presented. Selectmen hear the testimony, questions, and rebuttal, and then make their decisions.

In a new program prepared by the education staff of DEP's Information and Education Unit and the Solid Waste Management Unit, these dramatic scenes are also taking place in Connecticut's elementary and secondary schools. Students assume roles of residents, business people, and elected officials of the imaginary town of Cleanfield. As taxpayers and officials, they wrestle with

very real and complex environmental issues.

Setting the Scene

Cleanfield is a typical Connecticut town on the banks of the Nippentuck River. There are three sections of the town, each with its own distinct characteristics and problems: North Cleanfield, Cleanfield Center, and Millrace. Cleanfield is essentially a one-industry town; Royal Paint Company has been the town's major industry for 80 years, accounting for 30 percent of the town's tax base and 30 percent of its workforce. Right now, this peaceful New England community has a problem.

The DEP has declared that Royal can no longer dump its sludge on Anders' Landfill, the garbage dump on the swampy outskirts of town. Not only must Royal

remove offending sludge already dumped at that location, but all sludge generated by Royal in the future must be disposed at a secure, lined landfill specifically built for hazardous wastes. Cleanfield has two choices: It can either approve the construction in town of a secure landfill, or it can vote that Royal Paint export its waste 800 miles away to an existing licensed facility.

If a new disposal area is chosen in town, it will be located in one of three candidate sites given tentative approval by the DEP -- either in North Cleanfield, Cleanfield Center, or Millrace. Not allowing Anders to develop one of these sites would force Royal Paint to ship its waste to ECO-CHEM, a disposal site 800 miles away, at an additional cost of \$2 million dollars per year. Constructing the landfill in town would guarantee tax revenue and make a happier Royal Paint Company. The neighborhood interests in the three proposed landfill locations, however, have different concerns.

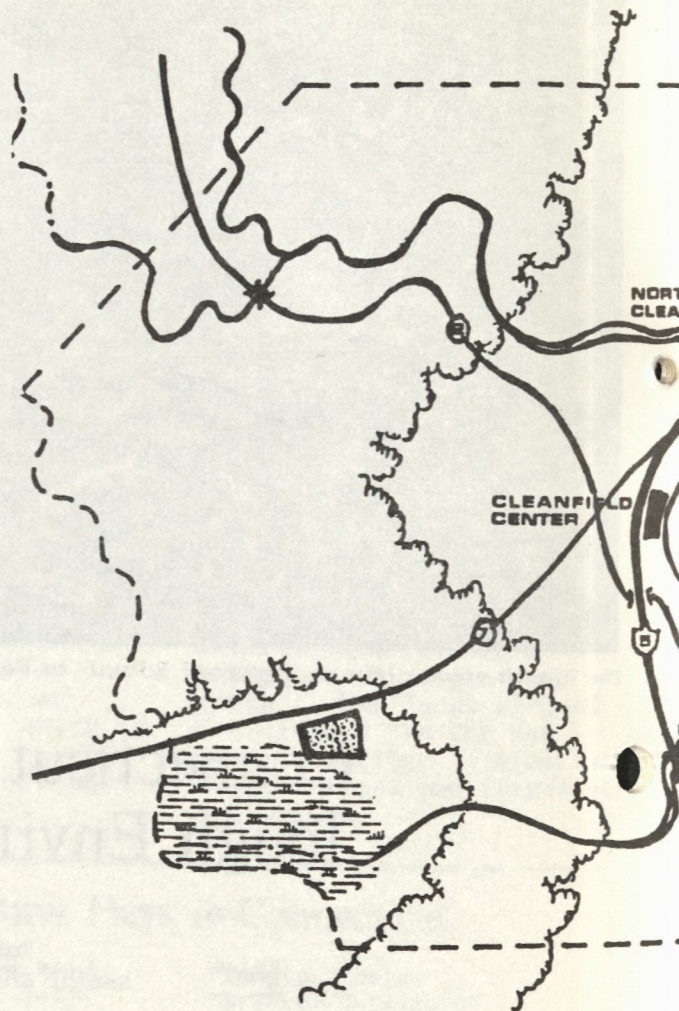
An observer could easily forget the participants are children.

Public Hearing Cleanfield Town Hall

Mr. Jon Marc Jagush's sixth grade class at Meetinghouse Hill School in New Fairfield participated in the role-playing program prepared by the DEP. What follows here are excerpts from some the interactions which took place.

The selectmen called the meeting to order with a reading of the code of conduct expected of all parties to the hearing. Order was to be maintained at all times.

Representatives from Anders' Landfill and from ECO-CHEM presented similar discussions of lined landfill reliability and double-line safety measures. Next, a consortium of businessmen representing North Cleanfield recommended that the secure landfill be built in Millrace.



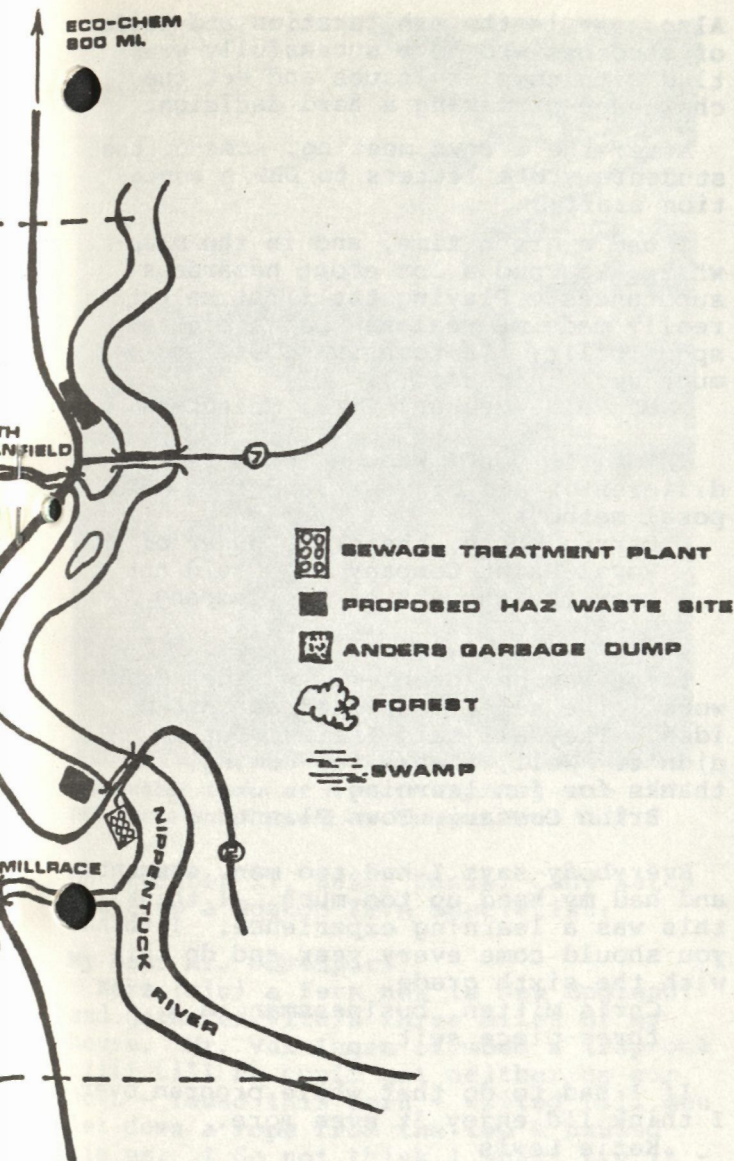
The Imaginary To

The first selectwoman addressed remarks to a representative of the Riverview Mall consortium: "You said you would make sure that the landfill had two liners if it was in Millrace, right? So if you think it's going to be so secure in Millrace, why don't you want the landfill near the mall?"

A mall spokesperson replied, "We don't want to run the risk of having it in North Cleanfield -- there's always a risk."

"What about the people in Millrace?" asked the first selectwoman.

The Riverview Mall consortium, standing by their resolution to put the dump in the Millrace section of town, concluded:



Map of Cleanfield, CT

"North Cleanfield is the business center. An accident could ruin a lot of businesses. It could cause an economic crisis in Cleanfield."

The president of Royal Paint Company, agreeing with positions taken by the Anders' Landfill people and the businesspeople of North Cleanfield, recommended that the landfill be built in Millrace. He indicated that such a landfill could be safeguarded and monitored to minimize risks to public health and the environment.

"There is proof that this type of liner here would definitely probably never break through."

A question came from the floor: "What

if it did, though."

More questions from the floor made it difficult for the president of Royal Paint to return to his seat. He answered questions en route to his chair and announced with some irritation, "No more questions."

The citizens' group from Cleanfield Center surprised the audience with a three-point proposal burdening Royal with waste management responsibilities, including export of waste to ECO-CHEM.

"We should own up to our name in Cleanfield."

To press their point, the citizens entered in evidence a sample of contaminated water, polluted by leachate from Cleanfield's garbage dump. The selectmen were handed the test tube with instructions to sniff the contents.

Speaking about some Cleanfield Center wells already condemned by the Health Department, the spokesperson mourned,

"There is proof that this type of liner would definitely probably never break through."

"We don't know what can be done to help us, except that the Health Department condemned our wells."

Speaking about the importance of Royal Paint Company to the town, someone said, "We need the business, but we don't need the toxic waste."

On the practice of sending the waste out of town, another student said, "Some other town will accept it, because they already have a landfill."

At this point, the first selectwoman admonished all parties to "keep the noise level down." She then introduced the next presenters, the town planners.

The town planners reported that, having canvassed all interested parties and recognizing the economic benefits for the town, the disposal area should be sited in Millrace. In the pandemonium that followed, there was general disa-



One of the developers pleads his case.

greement about the veracity of the polling claimed done by the planners and about the honesty and knowledge of the planners themselves. The offer by the planners of a new swimming pool to the citizens of Millrace fell on deaf ears: "We don't want swimming pools. We want a clean town."

Pleading their case, the planners pointed out: "If we dump in Millrace, and even if the groundwater and the river do get contaminated, it will flow downward and out of town. We won't contaminate Cleanfield Center and North Cleanfield."

The response to this was, "We don't want to contaminate other people."

Discussion from the floor became more lively, and the selectmen continued their struggle to maintain order. The first selectwoman banged the gavel and announced that the selectmen would retire briefly to consider their decision. Five minutes later, the decision was announced, to the disappointment of some and the delight of others.

Afterword

Whether these role-play situations are conducted by elementary or secondary school students, an observer may easily forget that the participants are children. The well-dressed young people presenting their carefully-considered points of view appear to be the real thing. The appeals of a group angered by an apparent misrepresentation, the arguments made in favor of economic interests against guaranteed public health, the weariness and frustration on the faces of the role-players, all can be seen on the adult level in any town hall almost any night in Connecticut.

Also seen is the exhilaration and pride of students who have successfully wrestled with complex issues and met the challenge of making a hard decision.

After their town meeting, some of the students wrote letters to DEP's education staff:

I had a great time, and in the meanwhile, learned a lot about hazardous substances. Playing the first selectman really made me realize what a big responsibility the town is to us, and how much work is needed.

Danielle Reuter, First Selectman

Thanks to you I know a lot more about different types of waste and their disposal methods.

Darren Moore, the crazy owner of Royal Paint Company who could not bear the thought of his company closing

There was one problem. My idea didn't work. The selectmen voted against my idea. They all said I lied, but I didn't. Well, thanks for coming, and thanks for fun learning.

Brian Cossari, Town Planner

Everybody says I had too many comments and had my hand up too much. I think this was a learning experience. I think you should come every year and do this with the sixth grade.

Chris Mitten, businessman in a three-piece suit

If I had to do that whole program over I think I'd enjoy it even more.

Katie Lewis

For further information on the DEP's Hazardous Wastes education program, please phone the Information and Education Unit, Education Section, at 566-8108.



The role-playing situation shows once again that real learning can also be fun.



The author looks at a state Registry site with DEP Parks and Recreation Manager Paul Hilli.

On December 17, 1892, Daniel Cady Eaton wrote to a Boston fern specialist:

My dear Mr. Davenport,

Here (sic) a fern new to New England! and gathered within three miles of my house. Mr. Van Ingen climbed a traprock cliff till he could get neither up nor down - found this fern + waited till men let down a rope from the top & hauled him up. I do not think I shall try it - though I did climb clear to the top 42 years ago!

Daniel Eaton, then curator of the Yale Herbarium, was one of many naturalists who combed the Connecticut landscape for interesting natural features around the turn of the century. The fern was *Cheilanthes lanosa*, the hairy lipfern, and the cliff was the face of West Rock in New Haven. Little is known about Gilbert Van Ingen -- perhaps he was a Yale student. In any case, he must have been very excited about his discovery to hold on to the specimen while stuck on the face of West Rock, waiting for rescue. At the very least, he must have been a competent amateur botanist to have recognized the significance of his find.

Although the hairy lipfern is not a particularly striking plant, Van Ingen brought his specimen to Eaton, who sent it to Harvard for verification. The

State Landowners Asked to Help Preserve Our Natural Heritage

by
Diane Mayerfeld
Principal Environmental
Analyst

reason for all this excitement was the fact that the hairy lipfern is normally a southern species, and until that time had never been seen in New England. Even in 1892, decades before the concept of endangered species had been formulated -- much less been a political issue -- naturalists were fascinated by the rare and unusual.

The Importance of Natural Diversity

Professional biologists and amateur naturalists still search for interesting plants, animals, and geologic features, and now this research has taken on added significance with our understanding of the importance of natural diversity in a healthy, stable environment. At the same time, the continued existence of many uncommon plants and animals in Connecticut is threatened by development and habitat destruction.

Both the state of Connecticut and a number of private conservation organizations are seeking to protect natural diversity in the face of ongoing development. One of the most promising programs is the Connecticut Natural Heritage Registry, a joint effort of The Nature Conservancy and the DEP. The aim of this program is the protection of rare species and critical habitats through the voluntary cooperation of individual landowners.

The Hairy Lipfern Rediscovered

From 1850 to 1914, the face of West Rock was quarried by the C. W. Blakeslee Company, and the area where the hairy lipfern had been found almost certainly was destroyed. Then, in 1977, a geology student from Stanford University



DEP Commissioner Stanley J. Pac (center) discusses the Registry Program with David Warren, director The Nature Conservancy; Diane Mayerfeld, Connecticut Natural Heritage Program coordinator; Carol Evans, Nature Conservancy director of the Registry Program; and Leslie Mehrhoff, senior biologist, Connecticut Geological and Natural History Survey. (Photo: Margot Callahan)

returned to his parents' home in Connecticut for summer vacation. Poking around a nearby traprock ridge, he saw an unfamiliar fern. He compared this specimen with records at the Yale Herbarium and found that he had discovered the first New England occurrence of hairy lipfern since Van Ingen's site was destroyed.

Early in 1985, the owners of the property received a letter and then a visit from Carol Evans of the The Nature Conservancy, one of the directors of the Connecticut Natural Heritage Registry. Evans explained that the woods behind the home had the only known population of *Cheilanthes* in New England, and she asked them to consider giving the plants some protection.

Helping to Protect Our Heritage

The owners needed little persuasion. They were pleased that their property supported a rare plant and that they could help preserve it, and agreed to register the site. By so doing, they made a non-binding, verbal agreement to monitor the plants and notify the Conservancy or DEP of any threats to the

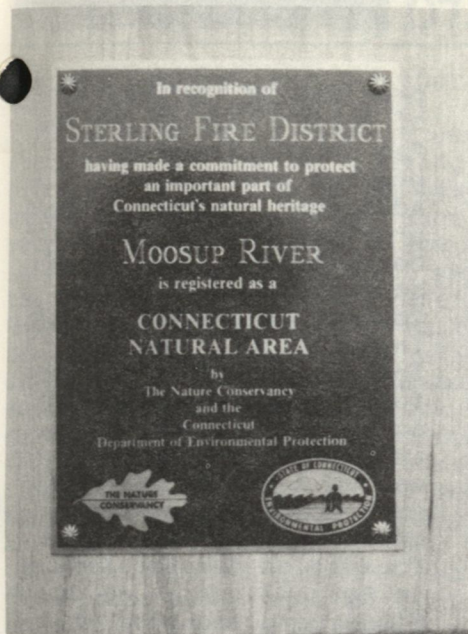
plants, to refrain from activities that would damage the population, and to give the Registry Program notice of any plans to sell the property.

In exchange, the Conservancy and DEP agreed to provide them with management advice and assistance as necessary and presented them with a plaque honoring their commitment to preserve the fern. The Registry Program also agreed not to publicize the location of the site, since that would infringe upon the privacy of the owners. In addition, publicity might further endanger the plants by drawing potential collectors to the site.

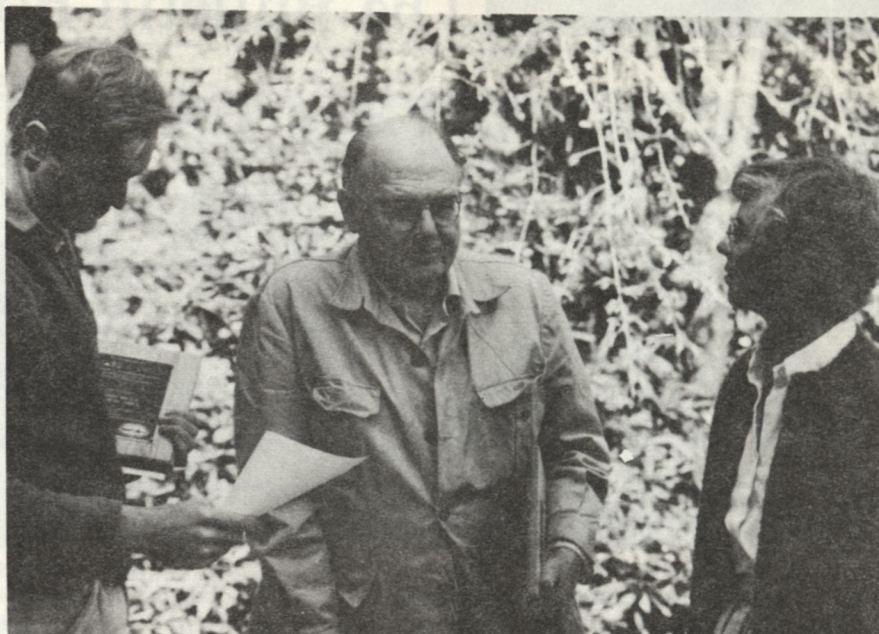
Participating in the Program

Many landowners have been approached. Most are happy to learn that their land contains a plant, animal, or habitat of special concern, and they have been willing to participate in the Natural Heritage Registry. In the first year of the program, two farmers, 24 homeowners, one developer, 11 private companies, and four towns registered properties.

Even DEP lands are registered.



One of the plaques presented by the DEP and The Nature Conservancy in recognition of commitment to the Natural Heritage Registry.



Carolie Evans talks with newly-registered landowner Edward C. Childs and his son Star.

Although state parks and forests are unlikely to be developed, normal activities such as logging, trail building, pond dredging, and the installation of recreation facilities and roads could result in damage to special natural heritage resources. The Registry Program ensures that foresters and park managers are aware of the special resources under their jurisdiction and offers the technical expertise of biologists and ecologists to the land managers.

Not every landowner is willing to register under this program. To date, five contacts have declined to register. Even in these cases, however, Registry efforts are not completely in vain. Some people are interested in protecting the resources, but are hesitant to formally commit to even a non-binding agreement. Others, who have little interest in environmental protection, have at least been informed of the special biological resources they control, so that unwitting destruction of these resources can be avoided.

A Good Start

The Connecticut Natural Heritage Registry has gotten off to an auspicious start, but of course the \$64,000 question is how effective non-binding agreements will be in preserving resources. To promote its long-term effectiveness, an annual newsletter will remind participants of their commitment

to protect their plants, animals, and critical habitats. More permanent forms of protection, from conservation easements to outright donation of property, may also be negotiated. Only time will tell how effective this program is, but to date it shows great promise, thanks to many conservation-minded individuals throughout our state. ■



The hairy lipfern is found in only one locality in New England, and is protected through a Registry agreement. (Drawing by Megan Rollins)

The Bulletin Board



Seasonal employees Andrew Bulson (left) of New Fairfield, and Jeffrey Glaude, of Danielson, were honored by DEP Commissioner Stanley J. Pac for saving the life of a woman at Squantz Pond in October, 1985. The two witnessed an assault and, when they interceded, the attacker ran off. The victim suffered a broken jaw, and is now described as "doing well." The assailant was later apprehended. Looking on are Dennis DeCarli, Deputy Commissioner, Division of Conservation and Preservation, and Leslie Whitham, Director, Division Services. (Photo: Robert Paier)

Recreation Guide Available

Once again, DEP's Coastal Management Program will release the Connecticut Coastal Recreation Guide, Routes to the Shore, to help you locate and enjoy our state's parks, beaches, and boat launches this summer. The map is of the Connecticut coastal area only, highlighting the southern border of the state from Route 95 to the water's edge. On the back of the guide is a listing of the parks and beaches along the coast which indicates if a particular recreation spot offers a swimming area, boating ramp, fishing pier, athletic field, campground, picnic area, and restrooms. There is also a short paragraph giving directions to each recreation area, and additional information about entrance fees, telephone numbers, and parking facilities. Many of you have already requested and received

copies of the map, but if you don't yet have your free copy, simply write to the CAM office at 71 Capitol Ave., Hartford 06106, or call us at 566-7114.

"Ag in the Classroom"

In response to a widespread lack of understanding of agriculture, its elements, and its impact on our daily lives, a new educational program called "Ag in the Classroom" has been initiated in Connecticut.

The object of "Ag in the Classroom" is to work with Connecticut teachers and provide them with the resources necessary to incorporate activities relating to agriculture into existing study topics such as science, social studies, and math. Initial concentration will be on grades four through six. Any teachers can obtain further information by contacting Dr. Thomas Duncan at 486-2327.

A small grant was

provided by the Department of Agriculture to get the "Ag in the Classroom" program started. Additional funds have been provided by private sector contributors. Funds are being handled by the Foundation for Excellence in Agriculture under a formal agreement. Further funding will be required and any organization or individual interested in making a tax deductible contribution should make checks payable to: Foundation for Excellence in Agriculture -- Ag in the Classroom, and send to Connecticut Farm Bureau, 101 Reserve Road, Hartford 06101.

Danger from Fishing Line

Ospreys are opportunistic in their use of nest building materials, which include discarded monofilament fishing line. Ospreys retrieve this line and place it in their nests, endangering themselves and their young. When the birds become entangled in the line, they struggle to rid themselves of it, and become even more entangled.

Connecticut ospreys have been experiencing a slow, steady population recovery over the past six years, but the loss of two young from a negligent act should not be taken lightly. Casual, careless disposal of monofilament fishing line can prove fatal to the offspring of a species still recovering in Connecticut.



History (cont'd., from page 2)

proved national economy that provided jobs previously unavailable.

The program was a dynamic one, with enrollees entering and leaving at different times. So it is easy to understand why camp attendance figures vary, depending on the source of information. An "official" report of the Connecticut Emergency Relief Commission indicated that 16,234 men had been enrolled between May, 1933, and July, 1936. Allowing for a more stable work force during later years, perhaps as many as 30,000 enrollees took part in the CCC program in Connecticut.

Stories of work performed have been told and retold. Roads, campgrounds, bridges, dams, buildings, and beaches -- taken for granted today -- were built by these young men. Tens of thousands of acres of conifer plantations planted in the 1930s now yield millions of board feet of sawtimber.

But perhaps most important of all, the Cs instilled a work ethic and an appreciation for the natural environment which influenced a generation of Americans. One has no problem finding discussions as to what has happened to young people of today. Of course, "today" may refer to the 1950s, '60s, '70s, or '80s, but there is no doubt that the American life style began changing drastically in the late 1950s.

Unemployment is always with us to some degree, and older folks usually feel that young people don't have enough constructive work to do. So over the years there have been numerous efforts to recreate the CCC experience. The Neighborhood Youth Corps in 1965 put hundreds of Connecticut teenagers to work on state forests and parks. But it became essentially a summer program and failed to reach the core city unemployed youth who needed it most. Since then, there have been the Youth Conservation Corps, the Young Adult Conservation Corps, the new successful Connecticut Conservation Corps, and an annual parade of proposals through Congress for a traditional Civilian Conservation Corps program. And behind it all is a remembrance of the "golden days of the Cs."

When one meets with a group of former CCC enrollees, the first impression is that of a group of teenagers that Nature has somehow betrayed with age.

Men in their 60s and 70s are still "boys" in their minds, and in a very short time the listener is convinced that these men left their camps only a few days ago. They still

have nicknames, sing camp songs, and remember good times shared half a century ago.

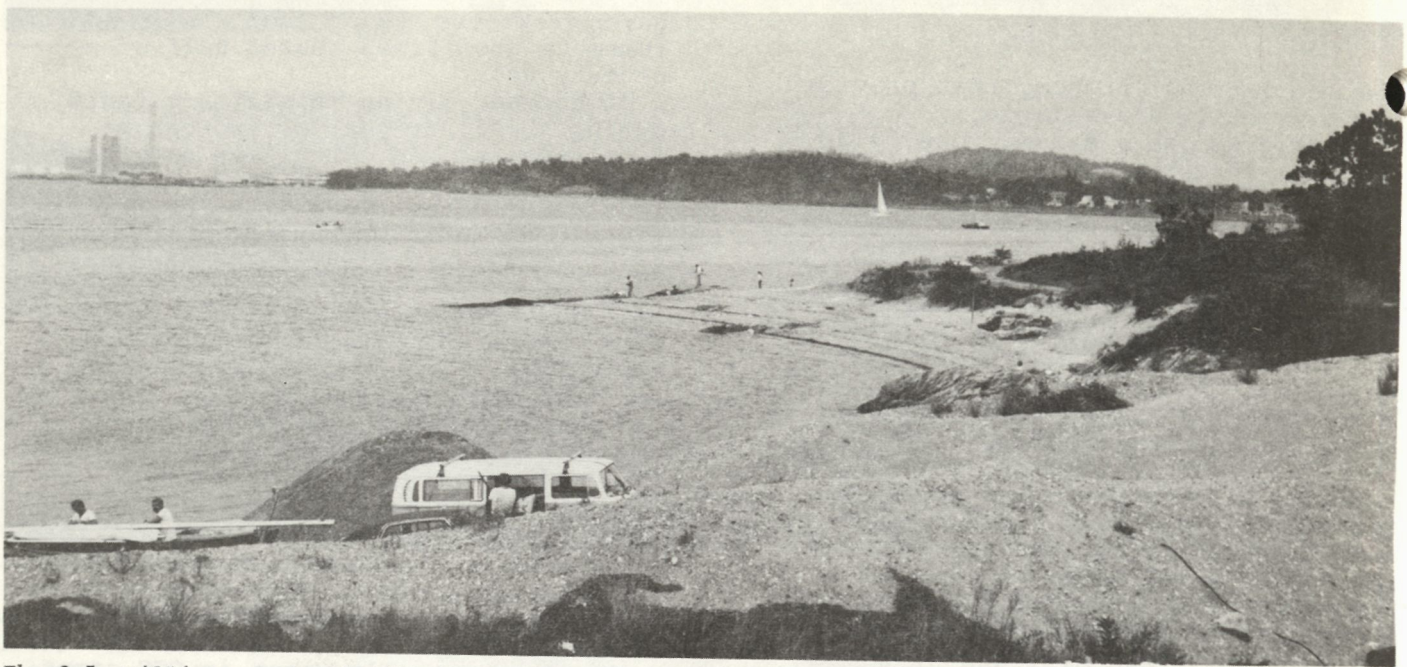
Of course, living in military tents during the first year or two can be forgotten, as can other less glamorous aspects of Corps life. Carrying water to a camp; doing the most strenuous structural labor with hand tools; working in heat, rain, cold, and snow; flies and mosquitoes; poison ivy; an all-male atmosphere; and plain "cabin fever" were all part of the CCC experience. Initially, towns dumped many of their most troublesome young into the program, passing off local problems to the military supervisors. There were members who were too aggressive, or lazy, or who became ill, or who stole from others. But all that is placed in a perspective seasoned by 50 years of living. What remains is a fond memory of shared difficulties and obstacles overcome.

The days actually spent in CCC camps probably were not quite as great as former members would like you to believe. But when one listens to their stories and looks at photos taken two generations ago, the enthusiasm is contagious. There are no frowns and few sad memories. To them, the Cs represented, perhaps, the best time of their lives.

And, for the nation, the Civilian Conservation Corps was historic. It was part of the beginning of the era of social support programs. It provided organizational experience needed for rapid war mobilization, and supplied many of the leaders of World War II military units. It gave us public recreation areas and facilities that are so highly prized today. And it gave us a group of men who are aware of the important role they played in society's evolution. They are history, and are proud of it.

It has been 50 years since the most active period of the CCC program. The facilities they built are in daily use, and the men themselves are still with us. The next 50 years will see the passing of those who made up the Civilian Conservation Corps, but their accomplishments and the legend will remain -- they will have made a difference.





The 8.5 million people who live around Long Island Sound exert a tremendous impact on this unique body of water. (CAM Photo)

The Long Island Sound Study

A story of cooperation

by Paul Stacey
Environmental Analyst

In Fiscal Year 1985, Congress appropriated \$4.0 million for the U.S. Environmental Protection Agency (EPA) to carry out a far-reaching water quality program for Long Island Sound. "There are a number of reasons why this program is so significant," said Richard Barlow, Director of DEP's Water Compliance Unit. "First, we are now looking at Long Island Sound as a total system, not just as individual harbors and coves as we did in the past. Secondly, several agencies, which had previously worked independently from different points of interest, will now be working together. This interaction will bring about a greater understanding of this rich and now possibly threatened body of water, and enable us to work more efficiently for the benefit of all."

The Sound

Long Island Sound is a major estuary of the Atlantic Ocean, approximately 1300 square miles in area, bounded on the north by the Connecticut and New York shorelines, and on the south by Long Island. The Sound is approximately 110 miles long, and 21 miles wide at its widest point.

Long Island Sound is a unique estuary in that it opens to the sea at two ends and fresh water enters from shorelines along its long axis rather than at its head. The major rivers discharging into the Sound, all located in Connecticut are the Connecticut, Housatonic and Thames Rivers. The East River, which is actually a tidal strait connecting Long Island Sound with New York Harbor, also contributes freshwater to the Sound from surface runoff and point discharges in the New York City area.

The Sound and its local embayments are mostly characterized by a very large population around the perimeter. It is estimated that about 8.5 million people reside in the counties bordering the Sound, which translates to nearly 7,000 persons for every square mile of the Sound. The trend of population growth in the area has resulted in major impacts on the land use, causing increased runoff and leading to environmental stress.

This large population also makes extensive use of the Sound's resources. There are an estimated 20 million beach users per year, and a summer weekend might find 100,000 boats using its waters. Although Connecticut ranks

fourth in commercial fish landings of the five coastal New England states, the resource is a valuable one not to be overlooked. Annual Connecticut landings of fish, including shellfish, taken in the Sound were around 4.9 million pounds in the early 1980s. New York commercial fisheries add another 2.7 or more million pounds to the annual total catch of finfish and shellfish. Of equal consideration is the large recreational fishery the Sound supports, which exceeds the commercial catch in many areas. Clearly, the more than 7.5 million pounds of commercial fish landings per year which come from the Sound, more than 500,000 acres of shellfish beds, and numerous parks which provide valuable open space to local residents, as well as access to marine recreational beaches and fisheries, identify Long Island Sound as an immensely valuable commercial and recreational resource.

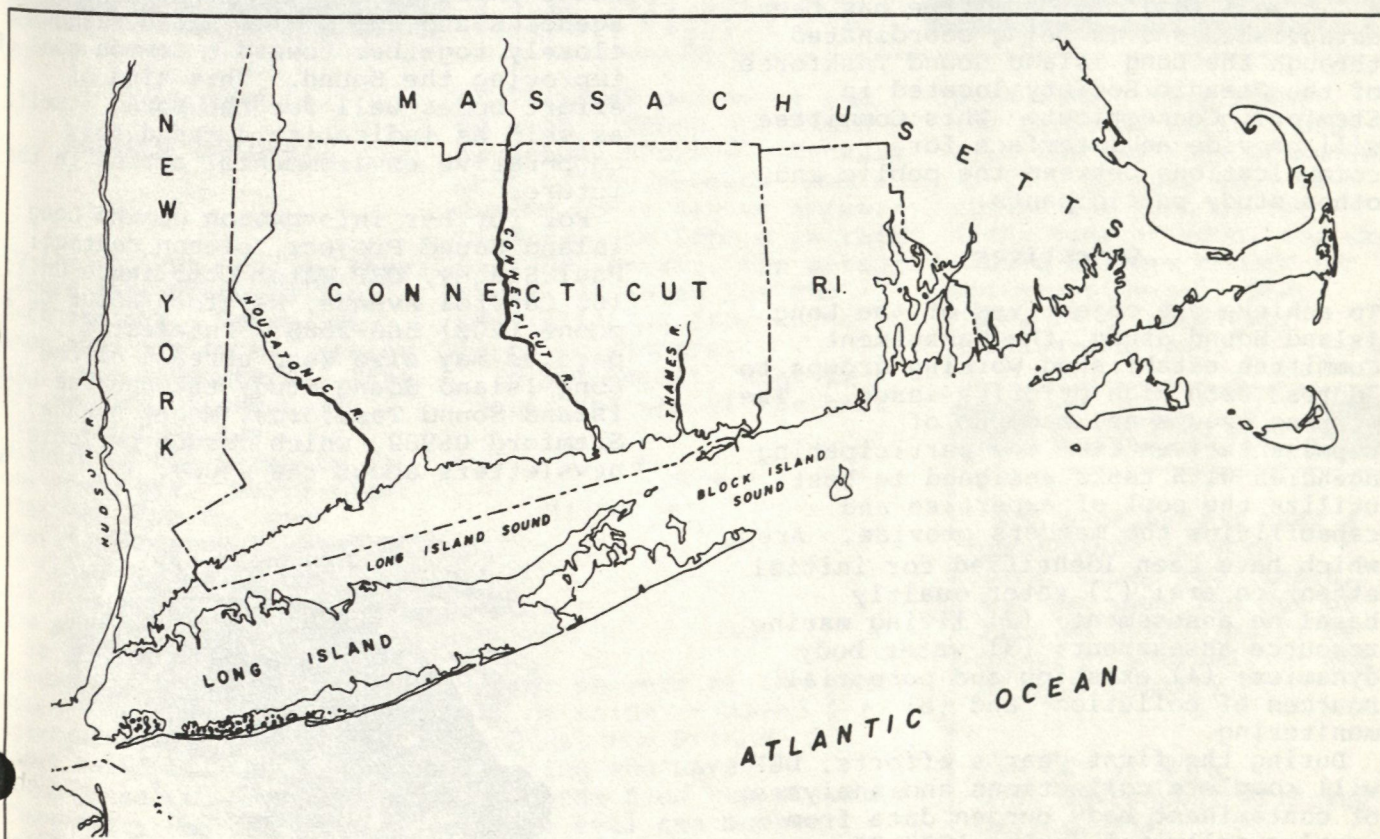
A system as heavily populated and used as Long Island Sound will unavoidably reflect the impacts of civilization. At present, there are more than 60 public sewage treatment plants discharging into the waters of Long Island Sound. Municipal wastewater flowing into the Sound has been estimated at more than 10 billion gallons per day. The biochemical oxygen demand discharged to

the Sound is estimated at nearly 300 tons per day. There are 15 power generating stations and approximately 20 past and four active dredge disposal sites.

Yet, as point source problems are largely identified and treatment processes upgraded, pollution sources become more difficult to quantify and rectify. Problems such as non-point urban runoff, atmospheric deposition of contaminants, and the dynamics of existing contaminants found in the sediments of Long Island Sound must be targeted for definition and resolution. While the effects of oxygen-demanding materials and nutrients are still felt in many parts of the Sound, traditional sources such as sewage treatment plants may be contributing a smaller proportion of the discharges than in the past. The more difficult management of non-point sources may be in order. Similarly, substances which may be carcinogenic or mutagenic in trace concentrations must be identified and managed. These issues, some of which received little or no attention as recently as 10 years ago, are keys to the present study.

A Coordinated Effort

As Barlow indicated, this program, is significant in that it coordinates the



Long Island Sound is a unique estuary in that it opens to the sea at both ends.

This kind of effort indicates the trend for cooperative environmental action in the future.

efforts of several geographic entities and concerned agencies. Involved in the program are two regions of the EPA, two states, three New York counties, and 24 Connecticut towns. Research marine scientists from Connecticut and New York Universities are providing technical guidance to the program. Also involved are the National Oceanic and Atmospheric Administration (NOAA), the Interstate Sanitation Commission (ISC), the New York State Department of Environmental Conservation (DEC), and the Connecticut DEP. Within the DEP, staff from the Water Compliance Unit, Marine Fisheries Unit, Natural Resources Center, and Planning and Coastal Area Management Unit will participate, as well as members of the Aquaculture Division of the Department of Agriculture and the Shellfish Sanitation Program of the Department of Health Services.

The EPA Management Committee for the study has recognized the need for input from citizens' groups and a concerned public. To satisfy this critical need, a Citizens Advisory Committee has been established and is being coordinated through the Long Island Sound Taskforce of the Oceanic Society located in Stamford, Connecticut. This Committee will provide an interface for communications between the public and other study participants.

Objectives

To achieve the objectives of the Long Island Sound Study, the Management Committee established working groups to address each high priority issue. The working groups are made up of representatives from the participating agencies with tasks assigned to best utilize the pool of expertise and capabilities the members provide. Areas which have been identified for initial attention are: (1) water quality baseline assessment; (2) living marine resource assessment; (3) water body dynamics; (4) existing and potential sources of pollution; and (5) monitoring.

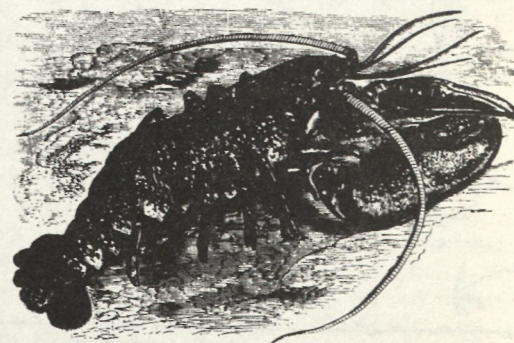
During the first year's efforts, DEP will complete collections and analyses of contaminant body burden data from samples collected during 1985-86. Finfish and lobsters were collected from

seven offshore areas while shellfish are being collected from approximately 20 coastal locations.

Looking Ahead

Under the Long Island Sound Study program, a large, complex, and significant body of water is being considered as a single, interrelated unit. The task is a difficult one because estuaries are complex and much about their structure and function is yet to be learned. Long Island Sound in particular has suffered from a lack of concerted, long term research and monitoring programs. Since the last comprehensive look at the Sound conducted by the New England River Basins Commission in the early 1970s little has been done to implement and guide water management efforts. Since that time, critical issues and research needs have changed considerably as is reflected in the objectives of the present study. In addition, there is now a unifying factor in that many agencies and two states are working closely together toward a common goal of improving the Sound. This kind of effort bodes well for the Sound itself, as well as indicating a trend for cooperative environmental action in the future.

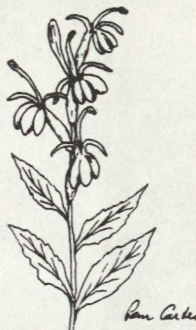
For further information on the Long Island Sound Project, please contact: Paul Stacey, DEP Water Compliance Unit, 165 Capitol Avenue, Hartford 06106 or phone (203) 566-2588. Interested parties may also keep abreast of the Long Island Sound Study through the Long Island Sound Taskforce, Magee Avenue, Stamford 06902, which issues periodic newsletters about the study.



Trailside Botanizer

The Cardinal Flower

by Gale W. Carter



This striking scarlet flower won a poll conducted by the New York Botanical Garden among naturalists as being the showiest, most interesting wildflower. It grows to a height of two to five feet and is usually found along streams and near swamps from July to September.

The blossom has a two lipped tube-like corolla. Its lower lip has three lobes that fan outward, while the upper lip has only two lobes. The five stamens form a tube that extends upward through the two upper lobes. They produce their pollen before the pistillate flower matures. It later grows

1986, Gale W. Carter

upward to form a Y-shaped stigma.

Hummingbirds are probably responsible for most of the cross-pollination. Most insects lack mouth parts that are long enough to reach the nectar at the base of the corolla. Also, most insects lack the ability to see red, which perhaps explains why there are so few wildflowers of that color.

The fruit is capsule-like and its many tiny orange-brown seeds are dispersed

by the wind.

The leaves of the cardinal flower are generally lance-shaped and toothed with usually a single stiff stem.

The cardinal flower is a native of North America. When French missionaries first discovered the flower, they were so impressed that they sent specimens to France to be planted in formal gardens. Its common name appears to have come from the similarity of the flower color to that of the scarlet robes of the cardinals of the Roman Catholic church.

The genus name, *Lobelia cardinalis*, was in honor of Matthias de L'Obel, a Flemish botanist, author, and physician.

The Cherokee Indians used the root of the cardinal flower for the treatment of syphilis and for the expulsion of worms.

The Night Sky

Summer Meteor Showers

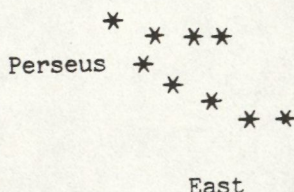
by
Francine Jackson

To the ancient people, they looked like stars falling from the sky. Today, we know they are rocks burning up in our atmosphere. They are meteors, flashes of light which we see disturbing the serenity of the night sky. Every night that you look up, you should see several meteors in the course of an hour or so; occasionally, however, you should see many more.

As the Earth travels around the sun, its path is often littered with aggregates of leftover comet material. When the Earth passes through one of these dirty regions of its orbit, more meteors than normal (sometimes upwards

of 25 to 40 per hour) can be seen. These are known as meteor showers. Because most of the meteors seen during these nights appear to originate from a certain part of the sky, the meteor shower is named for the constellation from which it seems to emanate.

In mid-August, what is considered one of the best



meteor showers of the year, the Perseids -- named for Perseus, the Prince Charming who saved Andromeda from the clutches of the evil sea monster -- can promise about 25 meteors per hour at their

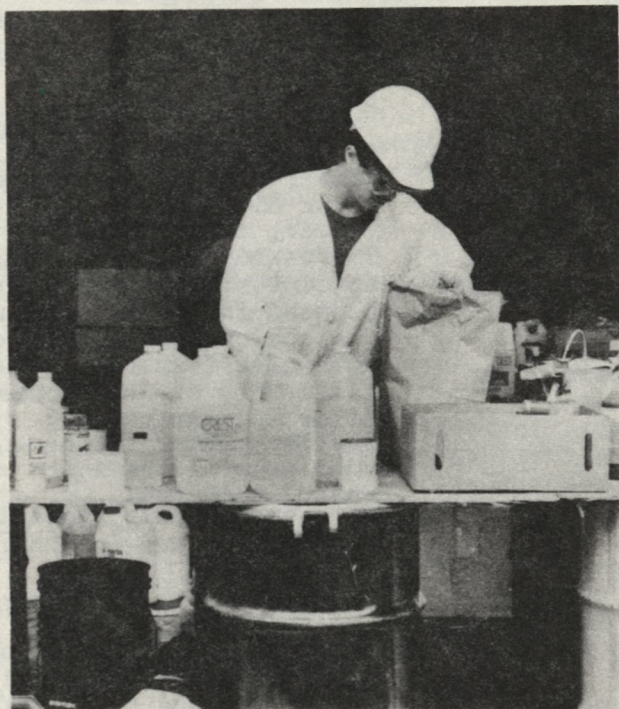
peak time. This summer, the Perseids will be best seen the evenings of August 11-13. Because this is during the time of the first quarter moon, the sky should be dark enough for optimum viewing. Best time, after midnight, looking eastward.

Endnote

"And because you have a good place to work, earn, live, eat, learn, and get some fun out of life as well, you'll be proud of yourself -- and of your country."

The CCC at Work
U.S. Government Printing
Office, 1941

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